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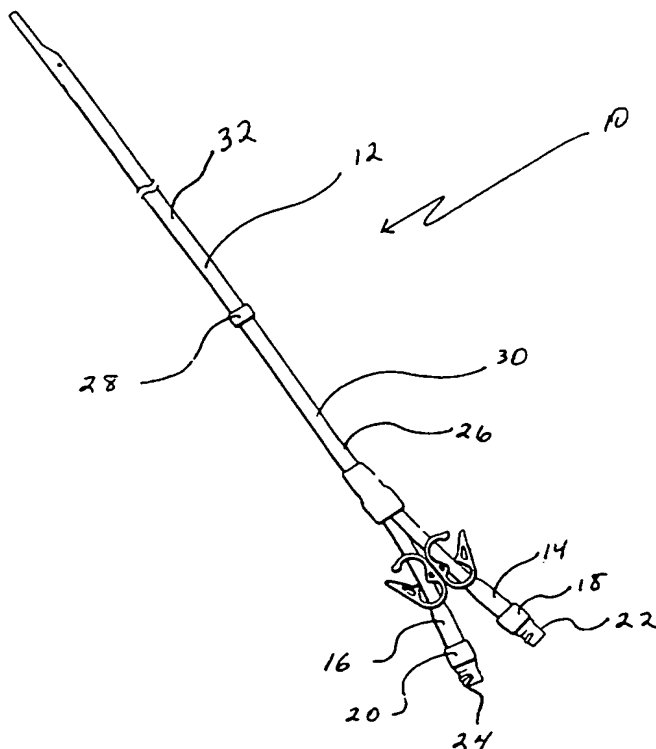
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(54) Title: MEDICAL DEVICES EXHIBITING ANTIBACTERIAL PROPERTIES



(57) **Abstract:** In general, this invention is directed to medical devices that exhibit antimicrobial activity and to methods for preparing and using the medical devices. The medical devices of the present invention include a polymeric portion that has been impregnated with an organic dye exhibiting antibacterial properties. Examples of organic dyes for use in the present invention include methylene blue, toluidine blue, methylene violet, azure A, azure B, azure C, brilliant cresol blue, thionin, methylene green, bromocresol green, gentian violet, acridine orange, brilliant green, acridine yellow, quinacrine, trypan blue, and trypan red. The medical device can be prepared by contacting at least a portion of the device with a solution containing the organic dye and a reducing agent. A solution with appropriate chemical activation of the organic dye can permeate entirely through the plastic. Various medical devices can be treated; examples include catheters, sutures, surgical staples, sponges, and hydraulic circuits of dialysis machines and water purification systems. As an example catheter treatment can be performed after catheter construction, allowing impregnation of glue joints, side-holes, hubs, etc.